AMENDMENTS TO THE SPECIFICATION

Delete the Explanation of Symbols section from page 7, line 15 through and including page 9, line 4.

Replace the paragraph beginning at page 9, line 22 with:

The evaporator 5 is placed inside a room in which air is to be cooled, meanwhile the other units are placed outside the room; then, the coolant pipes 6 are laid so that the coolant circulates among the units. Here, the evaporator ~~3~~ 5 may also be placed outdoors, for example, in a railway platform. Regarding the units other than the radiator 3, the evaporator 5, and the condenser 11 that are needed to heat-exchange with air, necessary and sufficient heat insulation is maintained so that the efficiency does not decrease due to heat leakage.

Replace the paragraph beginning at page 10, line 16 with:

In Fig. 1, an air conditioner 1 is composed of a compressor 2 as a first compressor for compressing coolant, a radiator 3 as a first radiator for radiating heat from the coolant, a coolant cooler 15 that is a coolant cooling means for cooling the coolant, a flow control valve 4 as a first flow control valve for controlling the coolant flow, and an evaporator 5 as a first evaporator for evaporating the coolant, which are sequentially connected by coolant pipes 6, and is configured in such a way that carbon dioxide as the coolant circulates. In the figure, the coolant flow is represented by arrows. A heat exchanging controller 16 is also provided as a heat-exchanging control means for controlling the heat-exchanging amount in the coolant cooler 15. The coolant that circulates in a vapor-compression refrigeration cycle configured of the compressor 2, etc. is also referred to as a first coolant.

Replace the paragraph beginning at page 13, line 17 with:

Fig 4 and Fig. 5 represent that, when the coolant temperature Tf at the entrance of the flow control valve 4 is suitably controlled, the COP is improved approximately 1.3 - 1.4 times compared with a case in which the coolant is not cooled at all. Moreover, in Fig. 4, when Te is 15 degrees or 10 degrees, in a range in which Tf is 20 - 30 degrees in any case when Pd is 9 MPa, 10 MPa or 11 MPa, each COP includes a maximum value, and its variation width is narrower than 0.1. When Te is 5 degrees or 0 degree, in a range in which Tf is 15 - 25 degrees in any case when Pd is 9 MPa, 10 MPa or 11 MPa, each COP includes a maximum value, and its varying width is narrower than 0.1. Fig. 5 represents that, except for a case in which Pd is 11 ~~Pa~~ MPa and Te is 15 degrees, in a range in which the drying ratio X is 0.2 - 0.5, each COP includes a maximum value, and its varying width is narrower than 0.1. In the case in which Pd is 11 Pa and Te is 15 degrees, when X is nearly equal to 0.1, the COP takes the maximum value, and also in a range in which X is 0.2 - 0.5, the difference from the maximum value is only approximately 0.2.

Replace the paragraph beginning at page 16, line 8 with:

Only different elements from those in Fig. 1 according to Embodiment 1 that represents a case in which only cooling is performed are explained. A four-way valve 20 as a first four-way valve for switching the flowing directions of the coolant outputted from the compressor 2 is additionally provided, so as to enable both cooling and warming operations. Because, during the warming operation, the radiator 3 and the evaporator 5 operate with their roles being exchanged each other in response to the case of the cooling operation, the radiator 3 is replaced by an outdoor heat exchanger 21 for exchanging heat between the coolant and the outdoor air, and the evaporator 5 is replaced by an indoor heat exchanger 22 for exchanging heat between the coolant and the indoor air. Here, during a cooling operation, the outdoor heat exchanger 21 operates similarly to the radiator 3, meanwhile the indoor heat exchanger 22 operates similarly to the evaporator 5.

Replace the paragraph beginning at page 44, line 14 with:

The locus of the coolant states, after the coolant is inhaled into the compressor and until outputted from the third heat exchanger 60, becomes the same locus "A - J - K" as that in Embodiment 9. The coolant is further cooled by the second coolant in the third heat exchanger 60; then, the coolant becomes the same pressure represented by the point "N" as that represented by the point "K", and further lower temperature state. The coolant is further compressed by the third compressor 51, and then, becomes a high-pressure supercritical fluid state represented by the point "O". In the coolant state at the point "O", the pressure is the same as that at the point "M", meanwhile its temperature is lower. The locus of the coolant-state variation, after the coolant is inputted into the radiator 3 and until inputted into the compressor 2, becomes the same locus ~~"M - C - D - E - A"~~ "0 - C- D - E - A" as that in Embodiment 1.